Special Issue

Nanostructured Materials in Gas Sensing Applications

Message from the Guest Editor

Due to several advantages, nanomaterials have been studied for gas sensing applications, including nanoparticles, nanowires, nanotubes, and graphene. These materials have been functionalized with various chemical moieties to increase their sensitivity and selectivity for target gases. The resulting sensors have been shown to have low detection limits, fast response times, and high stability over extended periods of use. Additionally, the integration of nanomaterials with microelectronic devices has enabled the development of low-power and highly miniaturized gas sensors. This has paved the way for their use in portable and wearable devices for the real-time monitoring of environmental and industrial gases. This Special Issue aims to collect papers on sensor-based nanomaterials. Authors are invited to submit articles that focus on selective enhancement, low power consumption, fast responses, and other aspects. Papers on the characterization and evaluation of sensing performance or the completion of gas-sensitive mechanistic discussions of experimental phenomena are also welcome.

Guest Editor

Prof. Dr. Dan Meng

School of Chemical Engineering, Shenyang University of Chemical Technology, Shenyang, China

Deadline for manuscript submissions

closed (30 May 2025)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/161816

Nanomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

mdpi.com/journal/nanomaterials

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/journal/nanomaterials

MDPI

About the Journal

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)